

REMARKS/ARGUMENTS

In the Office Action mailed September 27, 2005, the Examiner required an amended title because the original title was “not descriptive.” The Examiner also rejected claims 1-2 and 4-12 under 35 USC § 102(b) as being anticipated by U.S. Patent No. 6,023,147 to Cargin, Jr. et al. (hereinafter “Cargin”). Claims 3 and 13-20 were rejected under 35 USC § 103(a) as being obvious modifications of Cargin. For reasons set forth more fully below, Applicants traverse the grounds of rejection submitted in the prior Office Action.

TITLE

The Examiner states that the title is not descriptive of the invention, but failed to identify how the title fails to be descriptive. In an effort to address this ground of rejection, Applicants have amended the independent claims to make explicit that the apparatus and methods set forth in the claims conserve battery power for operation of an optical communication probe. Claim 1, as originally presented, did not specify that the communication probe was an optical communication probe. Applicants concluded that this ambiguity gave rise to the requirement for the title change. Therefore, Applicants submit that the claim amendments presented above address this requirement. Applicants submit that the original title now accurately describes the claimed invention. If the title remains non-descriptive from the Examiner’s perspective, then the Examiner is requested to make the grounds for this rejection explicit so they may be more specifically addressed.

35 USC § 102

CLAIMS 1-2 and 4-12

The Examiner rejected claims 1-2 and 4-12 under 35 USC § 102(b) as being anticipated by Cargin. Anticipation requires that each and every limitation of the claim be expressly present in the cited reference. The Cargin reference lacks a number of limitations and, consequently, does not anticipate the claims as originally drafted or as amended above. As originally drafted, the claims require that the switch selectively couples the battery *to the communication probe* in response to a power status signal from a diagnostic tool. The battery pack in Cargin does not have a switch that provides battery power to a communication probe in response to a power status signal from a diagnostic tool. Although the Examiner stated that the battery pack of Cargin operated in that manner, no diagnostic device was identified in the action and no reference was made to particular passages in the Cargin reference that teach a diagnostic tool or a power status signal that is generated by that diagnostic tool and used to selectively couple battery power to a communication probe. Therefore, claim 1 and those claims depending from claim 1 cannot be anticipated by the Cargin reference.

Reviewing Cargin in a manner most favorable to the Examiner's position, one may broadly interpret the terminal of Cargin as being a diagnostic tool and the radio module as a communication probe. In light of that interpretation, Cargin teaches the generation of a power status signal that indicates whether the terminal is in an active or sleep mode (Col. 13, line 29 to Col. 14, line 22). When the terminal enters the sleep mode, the current to the real time clock circuit and the inactive memory array is reduced (Col. 14, lines 8-14). The real time clock circuit and the memory array, however, are

associated with the terminal – not the radio module. Therefore, the Cargin reference fails to disclose the limitation of claim 1 regarding the coupling of the battery to the optical communication probe and cannot anticipate the claim. Moreover, the Cargin reference only teaches the reduction of the supply current in response to the power status signal and not the coupling or de-coupling of the battery with respect to the communication probe.

Cargin does teach that the processor in the terminal controls a switch that provides battery power to the radio module (Col. 19, lines 25-42 and Col. 24, lines 44-45). The control signal to the switch, however, is not described as being a power status control signal that indicates a diagnostic tool has entered its active mode. Instead, the signal is described as an on/off signal. Thus, the terminal of Cargin may function in its active state without powering on the radio module. The apparatus of claim 1 operates differently in that the switch couples the battery to the communication probe to deliver power in response to the diagnostic tool being in its active state. As a result, the communication probe is powered whenever the diagnostic tool is in its active mode.

Claim 1 requires that the housing for the battery be external of the diagnostic tool and that a cable between the battery and the diagnostic tool provide the power status signal from the diagnostic tool through the cable to the switch in the housing for the battery. The Cargin reference does not teach or disclose these limitations. Instead, the battery pack of Cargin is installed in the terminal housing (Col. 12, lines 44-65 and Col. 18, lines 33-36) and there is no need for a cable to connect a switch associated with the battery housing to the diagnostic tool. Furthermore, the power status signal of Cargin is not provided to the switch 252 at all. Thus, the switch of Cargin does not operate in the same manner as the switch in the claimed battery pack to provide power to an optical

communication probe. In fact Cargin expressly teaches away from the claimed invention by describing the generation of a terminal power status signal and then using that signal to reduce current to terminal components only. Applicants' claimed invention uses a diagnostic tool power status signal to selectively couple an external battery to an optical communication probe. Cargin fails to appreciate this application of the power status signal and instead teaches an independent generation of a communication probe on/off signal for controlling the application of power to the communication probe. Therefore, the claimed invention of claims 1-2 and 4-12 are patentable over the references of record.

For similar reasons, independent claim 8 is not anticipated by the Cargin reference. That is, the method of claim 8 requires that the power status signal from the diagnostic tool be used to couple the battery to the communication probe when the power status signal indicates the diagnostic tool is in the active state. Because these limitations are also incorporated in dependent claims 9-12, these claims are also not anticipated by Cargin.

For at least the reasons presented above, claim 1-2 and claims 4-12 are not anticipated by the cited references. Moreover, claims 1-2 and 4-12 are not obvious in view of the references of record because Cargin expressly teaches away from the claimed invention. As set forth above, Cargin generates a power status signal, but fails to use it to couple battery power to a communication probe. Instead, Cargin independently generates a communication probe on/off signal. Consequently, Cargin, either alone or in combination with other references of record, does not render the invention of claims 1-2 and 4-12 obvious.

CLAIMS 6 and 12

Claims 6 and 12 are patentable for the reasons set forth above and they additionally require that the battery pack include a positive and negative interconnect for directly coupling the battery to the optical communication probe. Cargin, instead, teaches that the communication probe be coupled to the terminal through a ribbon cable (Col. 17, lines 45-59). Thus, Cargin does not disclose the claimed structure for directly coupling a communication probe directly to the battery housing set forth in claims 6 and 12. Consequently, claims 6 and 12 are patentable over the references of record.

35 USC § 103

Claims 3 and 13-20 were rejected as being obvious modifications of Cargin. Specifically, the Examiner states that although Cargin does not disclose a watchdog timer it would have obvious to use a watchdog timer to conserve power whenever the device was not active. The Examiner also states that Cargin does not disclose an optical communication probe, but that it would have been obvious to use an optical communication probe in place of a radio probe. Applicants submit, however, that Cargin does disclose a watchdog timer and an optical probe, but that both devices are used in ways that teach away from the claim limitations presented in claims 3 and 13-20.

On the first assertion, Cargin does teach the use of a watchdog timer, but Cargin does not use the watchdog timer to generate the power status signal in Cargin. Instead, the watchdog timer is used for implementing communication and is only operated when a charger is coupled to the terminal (Col. 16, lines 1-19). Therefore, Cargin teaches away from the use of a watchdog timer in a terminal to generate a power status signal so that a

switch may selectively couple a battery to an optical communication probe. As a result, Cargin teaches other methods for conserving battery power, and fails to appreciate or suggest the use of a watchdog timer for such a purpose, even though a watchdog timer is available in the device of Cargin. Consequently, claims 3 and 14-15, which include limitations directed to the use of a watchdog timer for generation of the power status signal, are patentable over the references of record.


With regard to the second assertion, Cargin does teach the use of optical readers in conjunction with the radio transceiver (Col. 22, lines 19-39). Consequently, Cargin directly teaches away from the use of an optical reader in place of a communication probe. Additionally, Cargin teaches that the optical reader is used to obtain data from a bar code or shelf tag and not for bi-directional optical communication with a device external to the probe. Therefore, the optical reader of Cargin is not the same as the optical communication probe of claims 3 and 13-20. Furthermore, the switch of these claims operates in a different manner to power the bi-directional optical communication probe. Therefore, Cargin does not teach or suggest a use of a watchdog timer or an optical communication probe for the same purposes that those devices are used in Applicants' invention. The teaching away of Cargin is evidence that Cargin does not render the invention of claims 3 and 13-20 obvious.

Conclusion

For reasons set forth above, Applicants submit that the title is descriptive of Applicants' invention. Applicants also submit that claims 1-2 and 4-12 are not anticipated nor rendered obvious by Cargin or any of the references of record. Applicants have also demonstrated that claims 3 and 13-20 are not rendered obvious by

Cargin or the other references of record. Therefore, all pending claims 1-6 and 8-20 are patentable over all references of record, either alone or in combination. Applicants respectfully request reexamination and reconsideration of all pending claims and solicit issuance of a notice of allowance for all pending claims.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read "David M. Lockman", written over a horizontal line.

David M. Lockman
Attorney for Applicants
Attorney Registration No. 34,214

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Maginot, Moore & Beck LLP
Bank One Center Tower
111 Monument Circle, Suite 3000
Indianapolis, IN 46204-5115
Telephone: (317) 638-2922